

Fig. 1 interlace to progressive scan conversion task

Fig. 2a

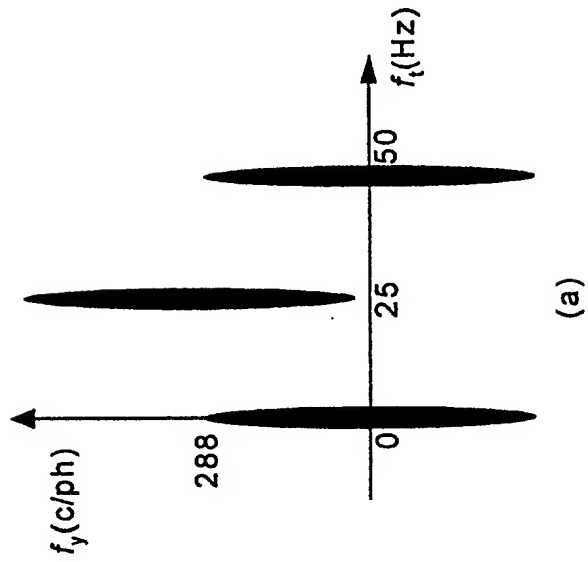
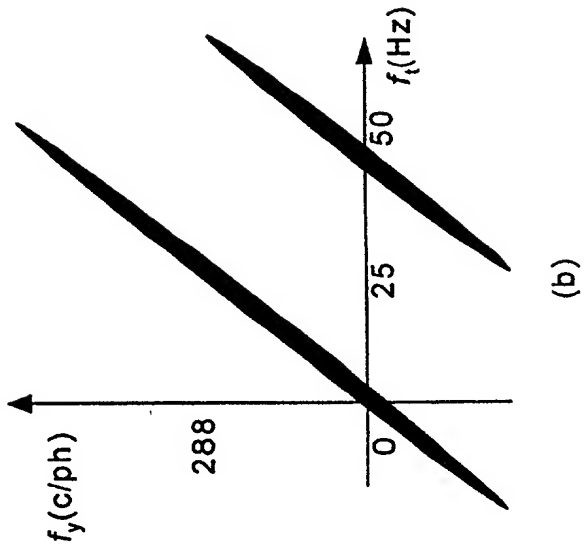


Fig. 2b



VT spectrum of a 50 Hz video signal, with vertical frequencies in cycles per picture height(c/ph)
 (a) No motion (b) Vertical motion.

Fig. 3a

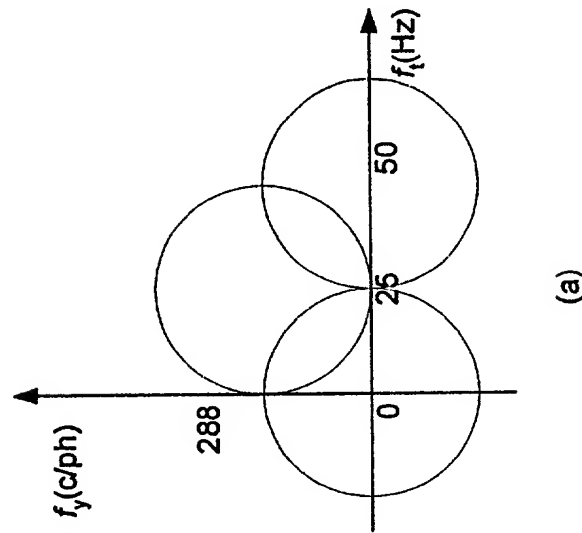


Fig. 3b

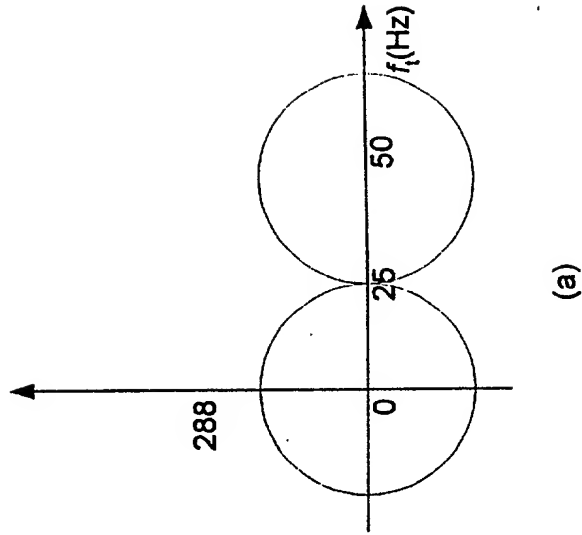


Fig.2.3 (a) Spectrum of the interlaced input. (b) target spectrum of the deinterlacer.

FIG. 4

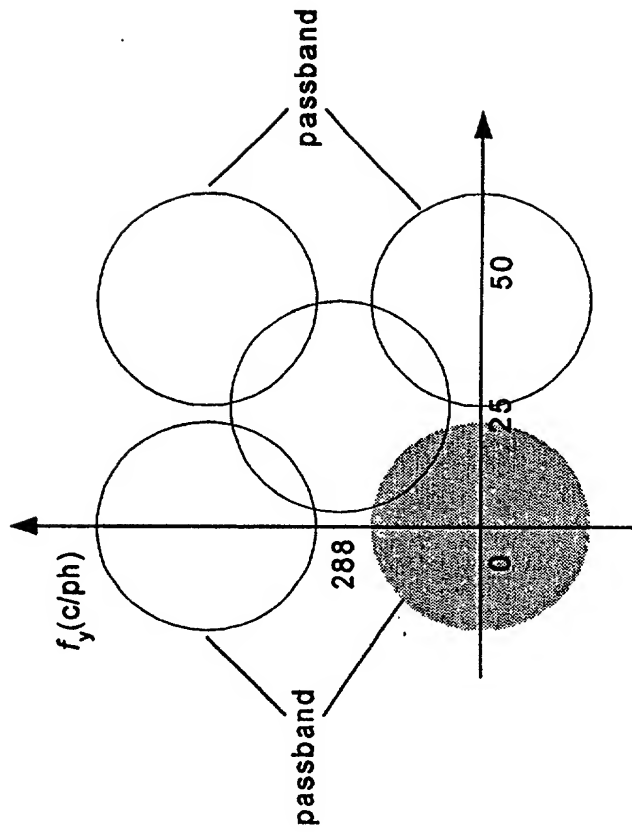


Fig. 4 Video Spectrum and a VT filter

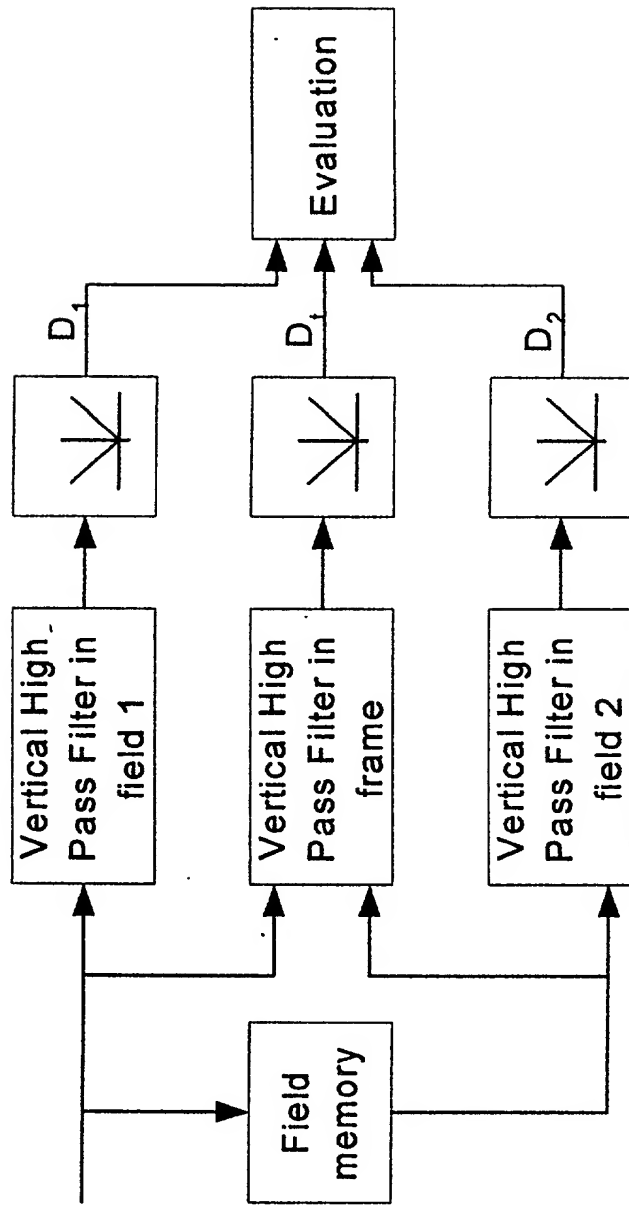
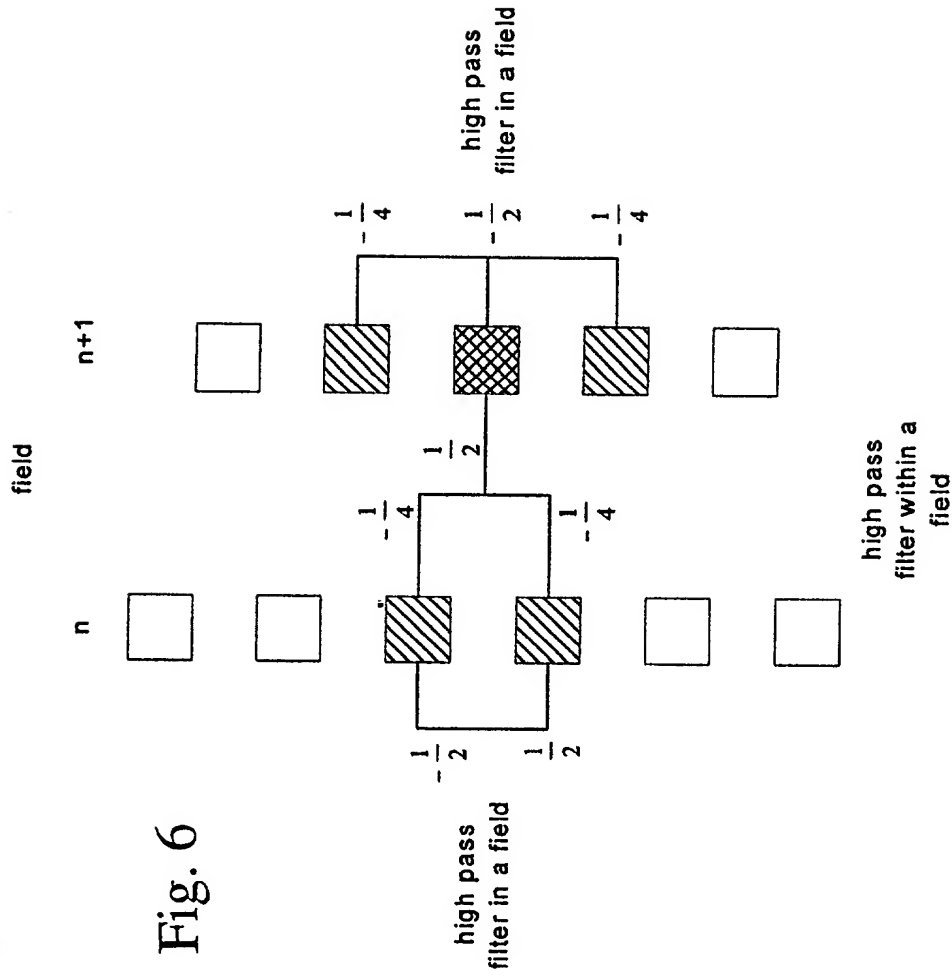


Fig. 5 Schematic of a Mouse's Teeth Detector

Fig. 6



Coefficient of the vertical high pass filters by means of a Mouse's Teeth Detector

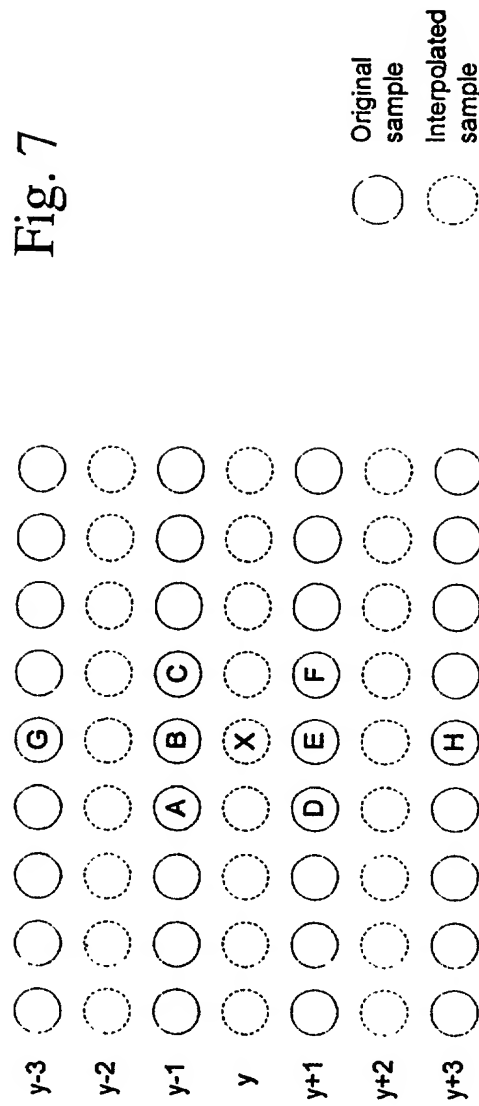


Fig. 7

Aperture of edge-dependent interpolators

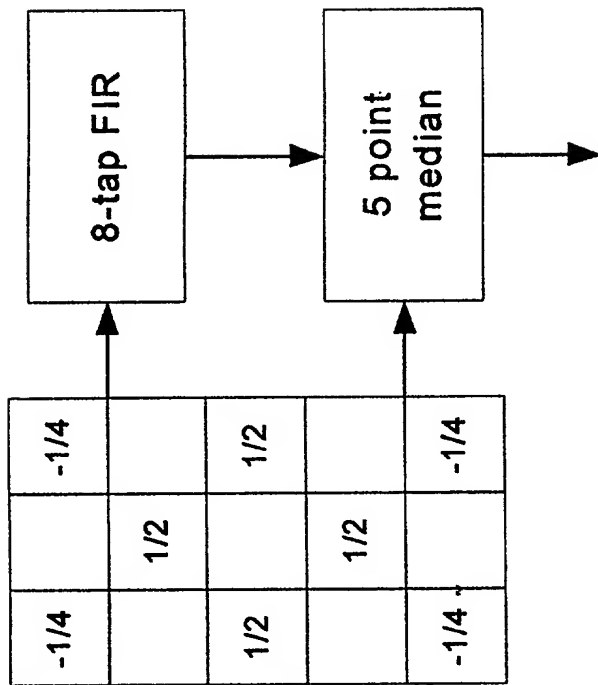


Fig. 8 The FIR Median Hybrid

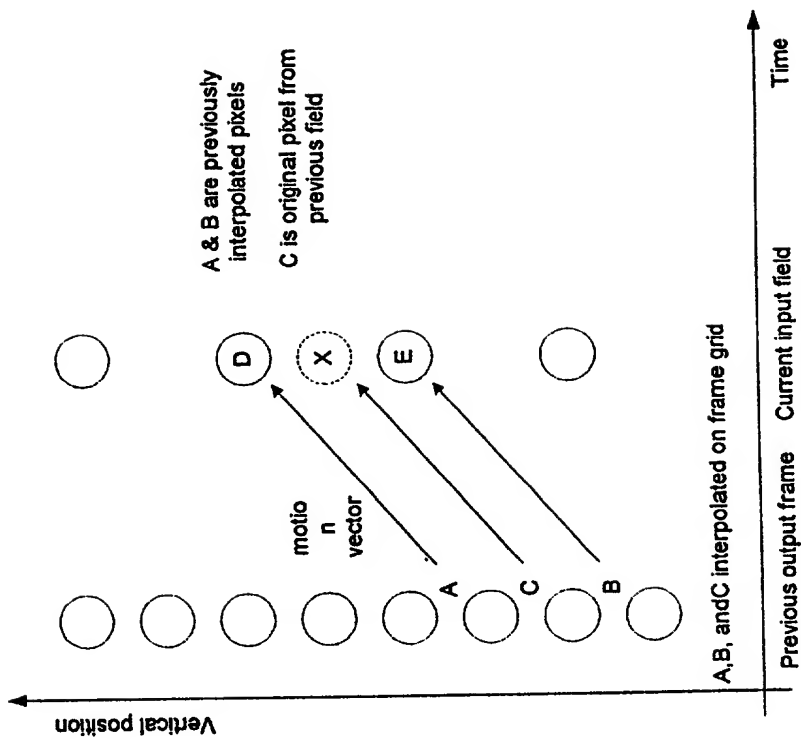


Fig. 9

Time Recursive Algorithm

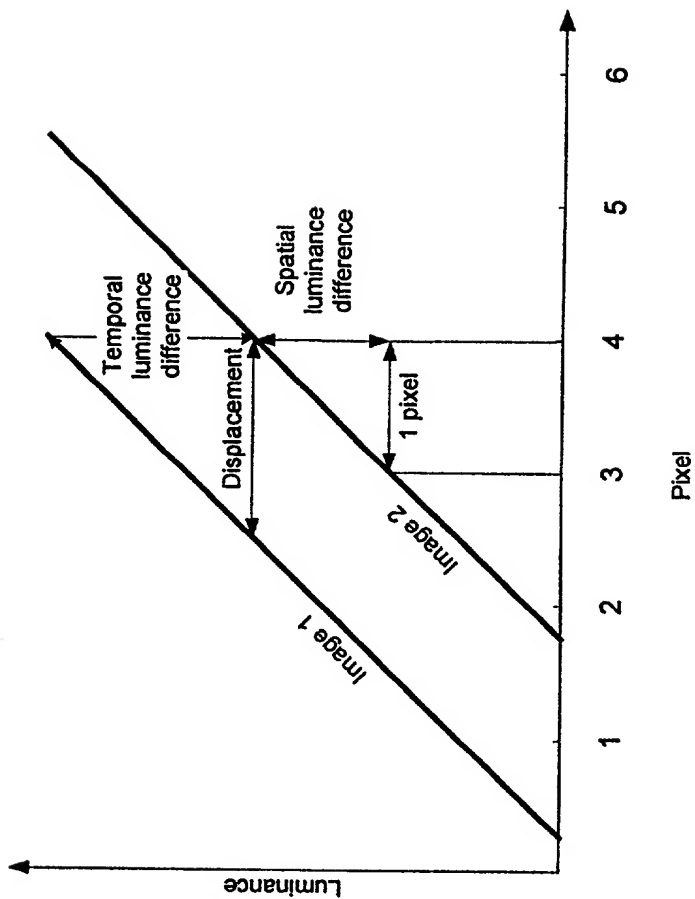
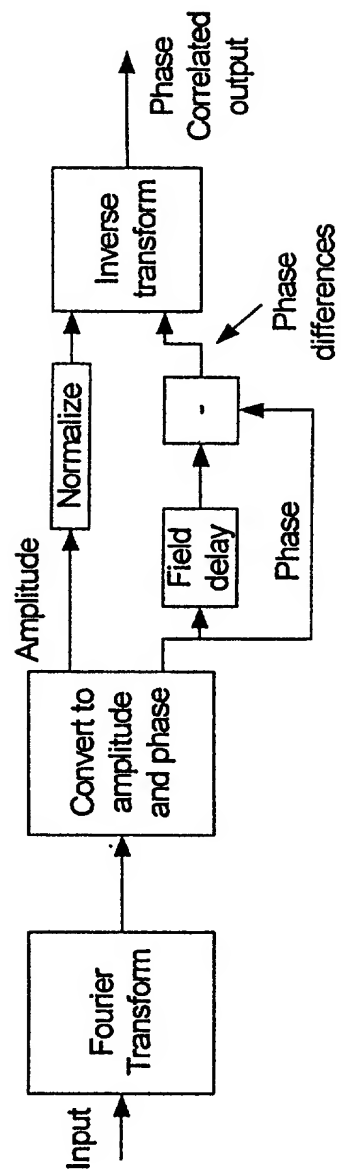


Fig. 10

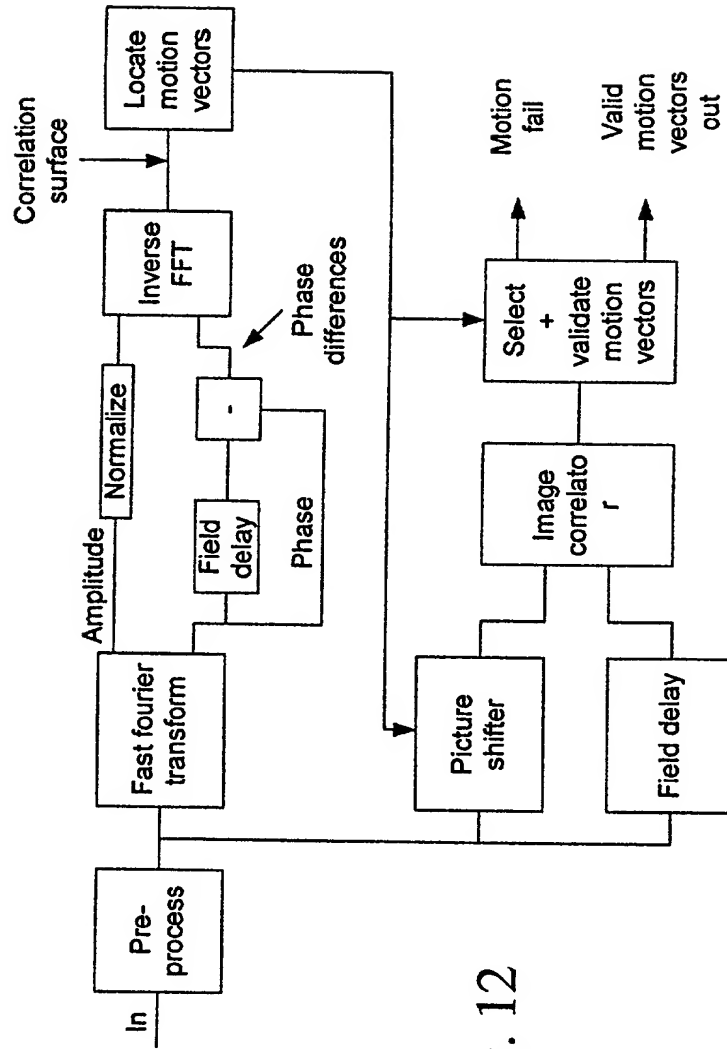
The principle of gradient matching. The luminance gradient across the screen is compared with that through time

Fig. 11



Basic Components of a phase correlator

Fig. 12



Block diagram of phase correlated motion estimator

Fig. 13

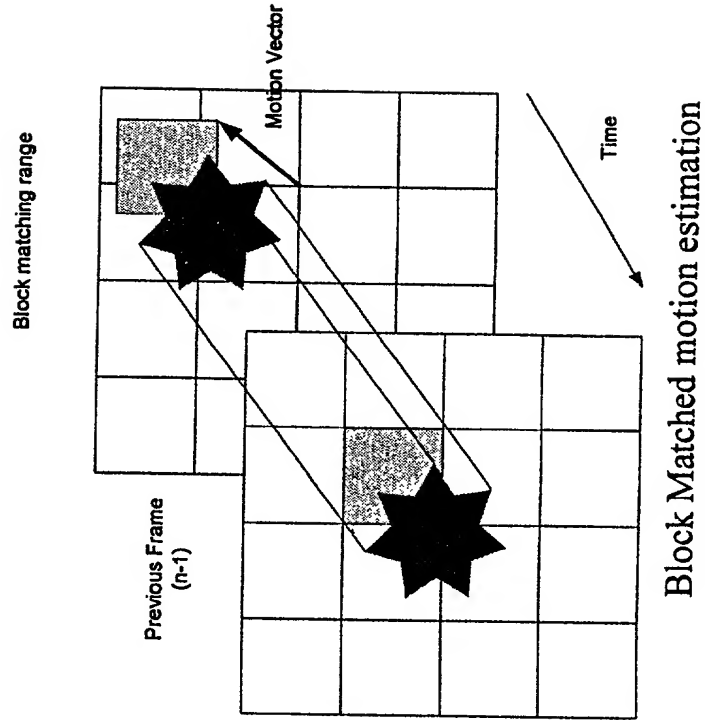
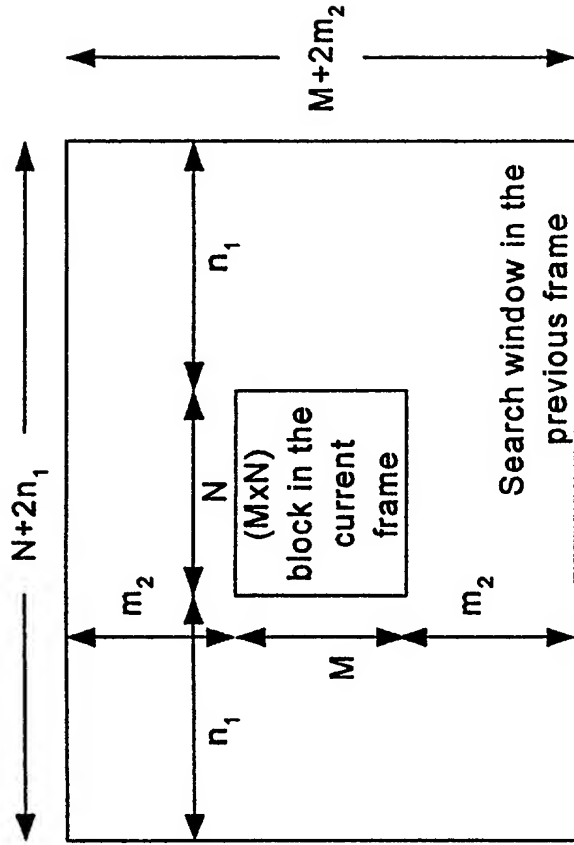
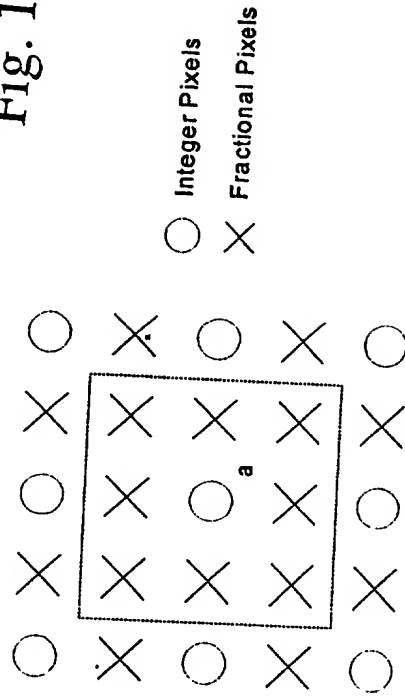


Fig. 14

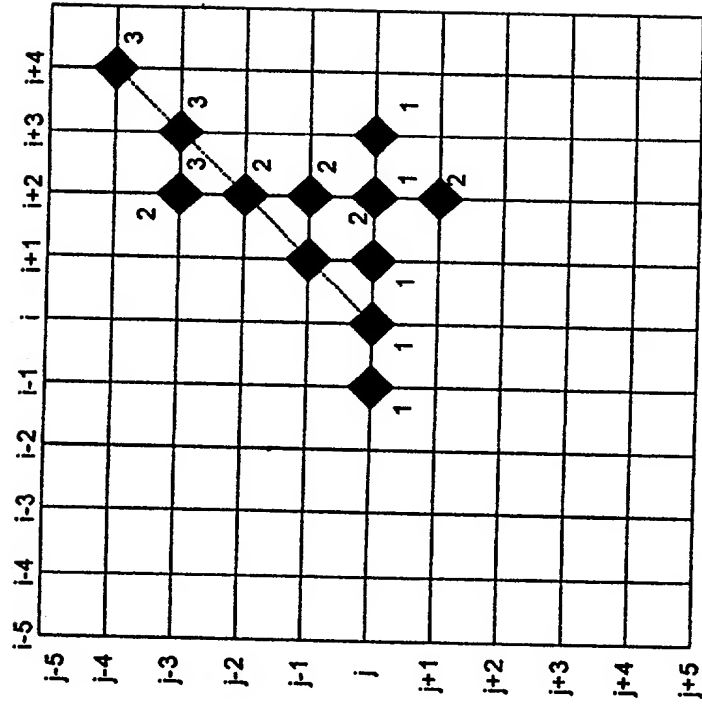


Motion estimation of $B(x, y, t)$ within the search window. Notice that the $\overline{MV}(x, y, t)$ range is $\pm n_1$ and $\pm m_2$.

Fig. 15

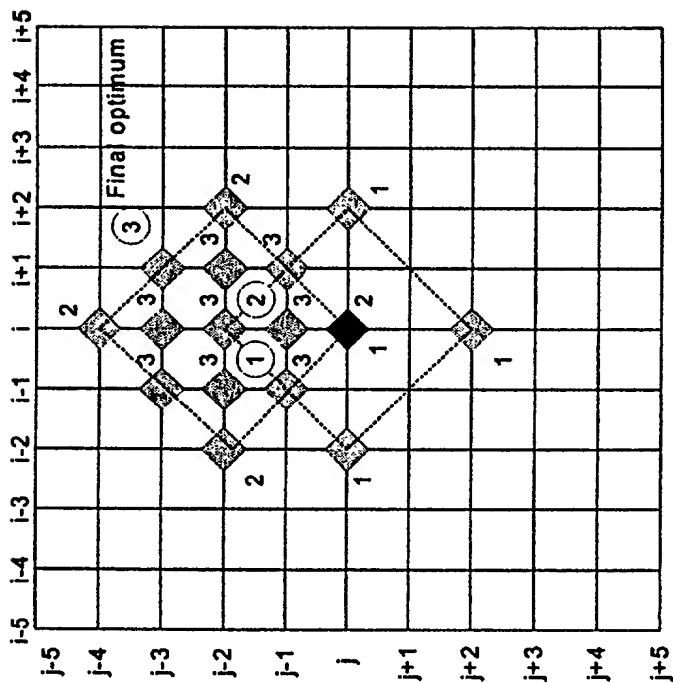


Motion estimation at half pel accuracy



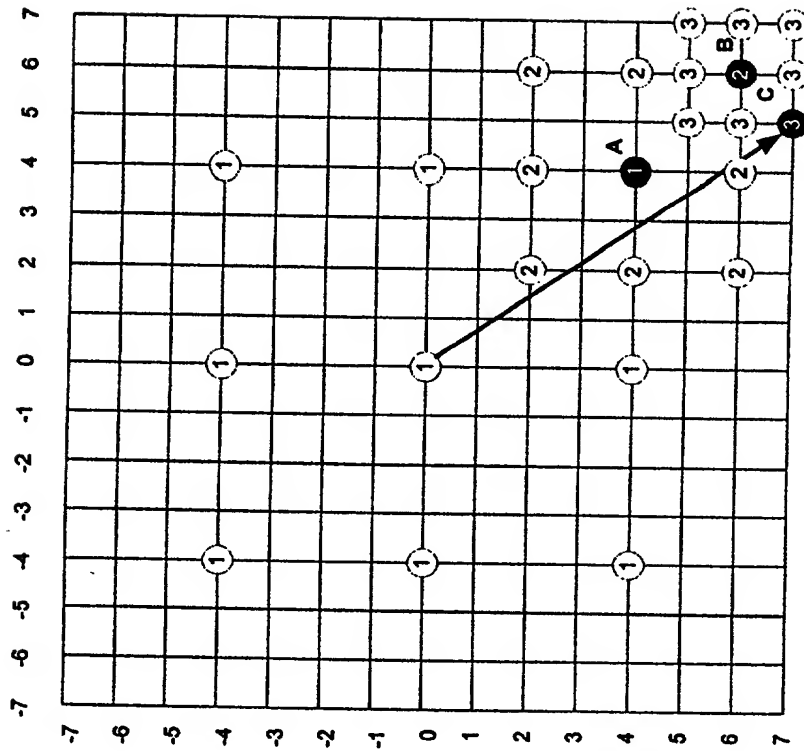
A one-at-a-time search and conjugate Direction search

Fig. 17

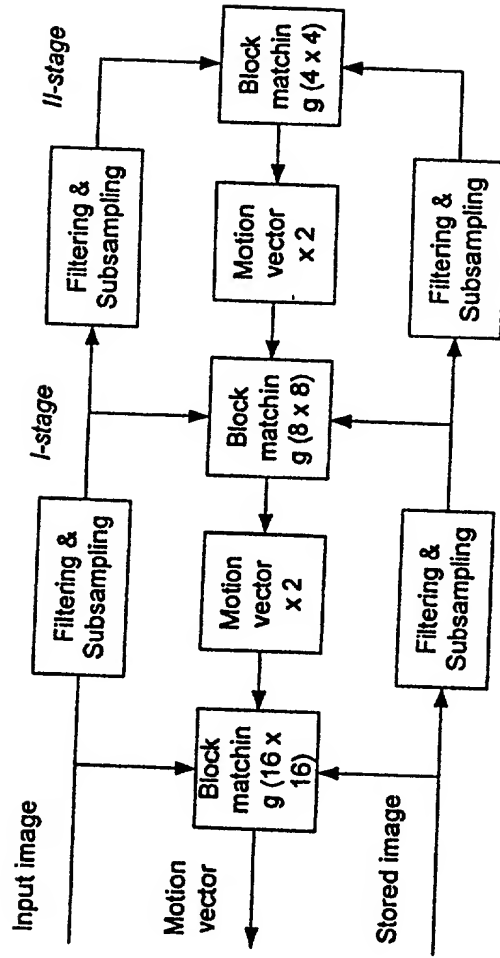


The logarithmic Search algorithm

Fig. 18

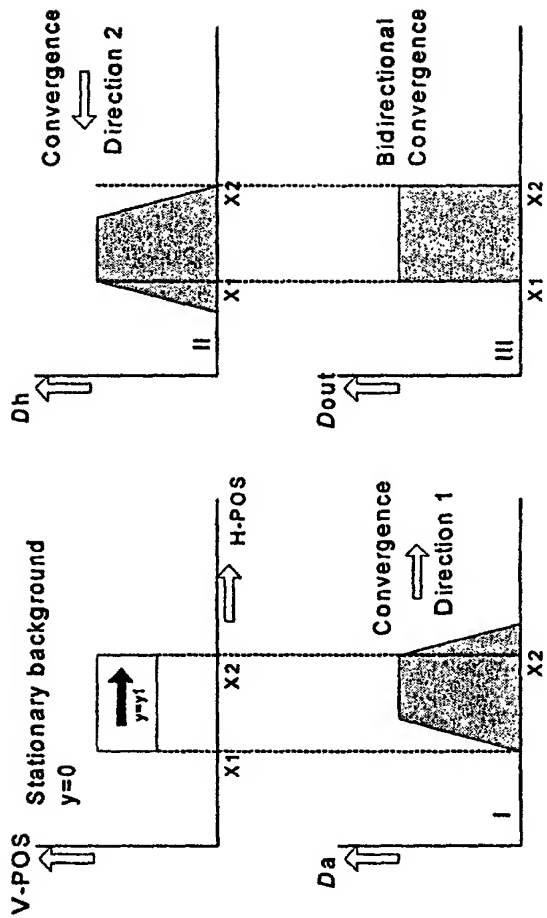


Three Steps Search BMA



Hierarchical Block Matching Algorithm for motion estimation

Fig. 19



The 2D convergence principle

Fig. 20

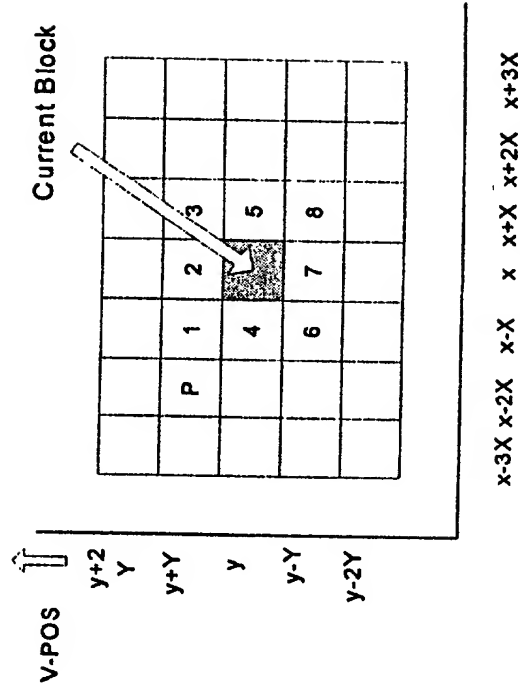


Fig. 21 Locations of the predictions around current block.

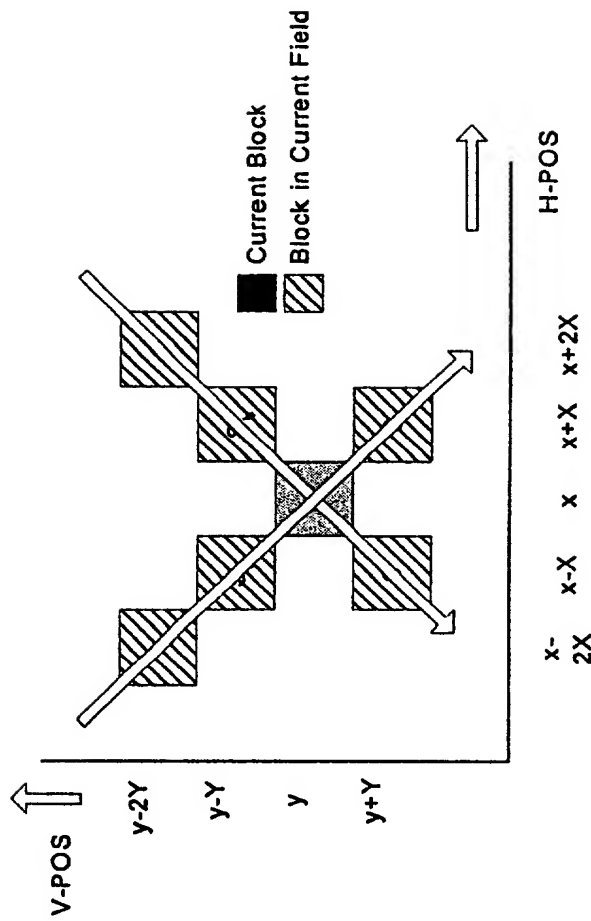


Fig. 22 Location of the spatial predictions of estimators a and b with respect to the current block. The arrows indicate the convergence directions.

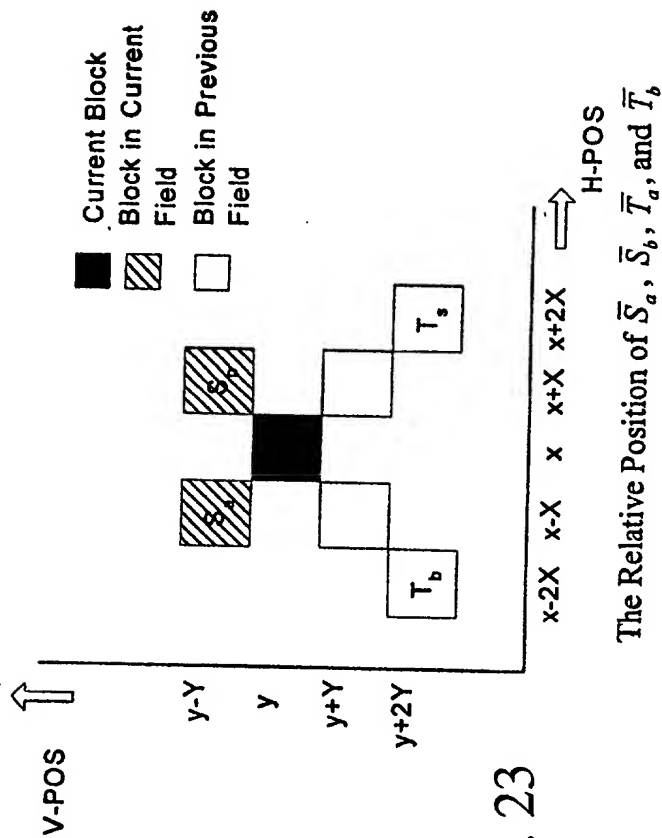
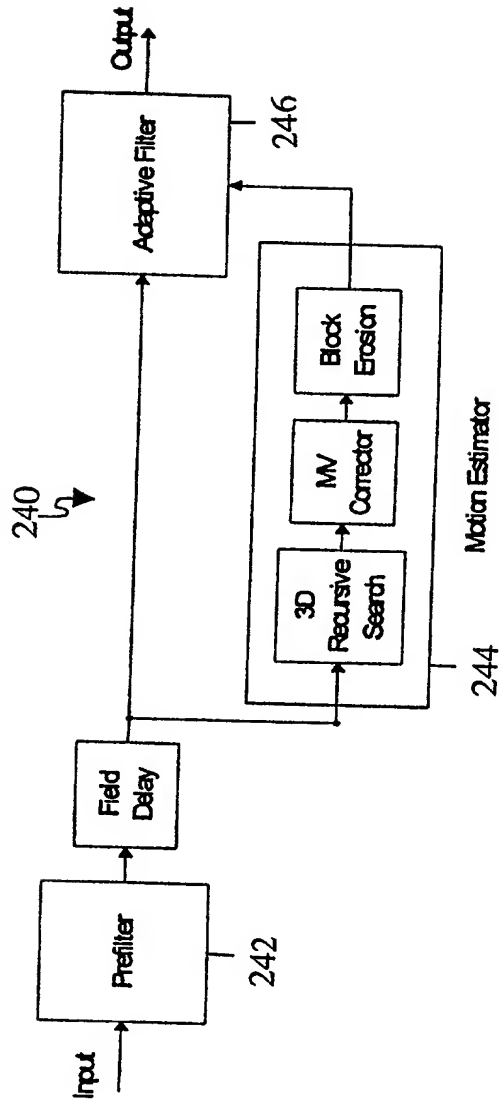


Fig. 23



Basic Block Diagram of the Adaptive Interlace to Progressive Scan Conversion

Fig. 24

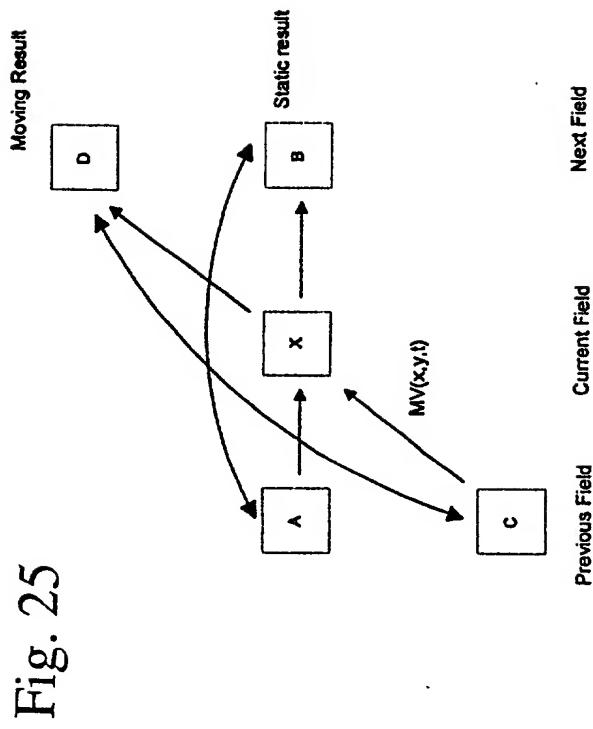


Illustration of motion vector correction algorithm

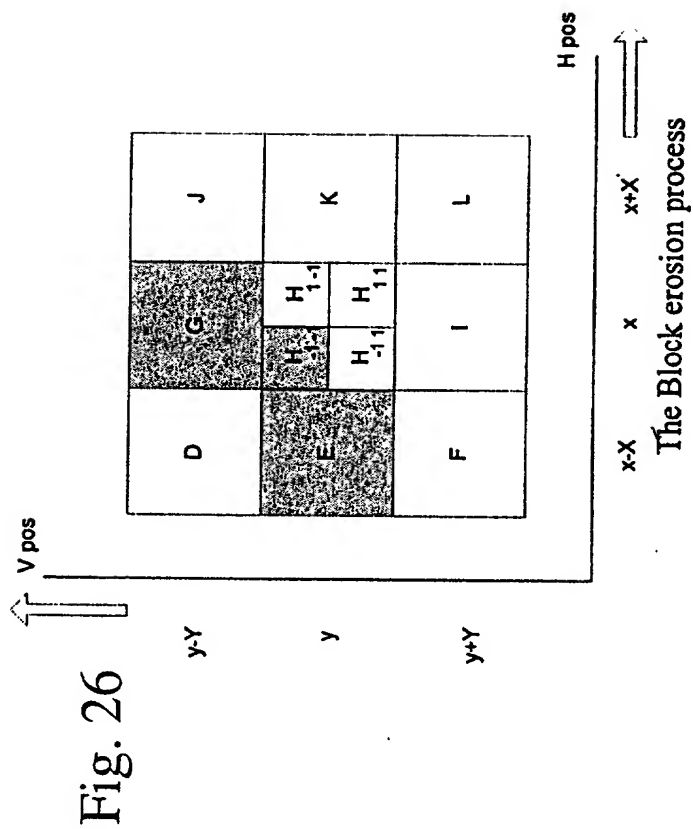
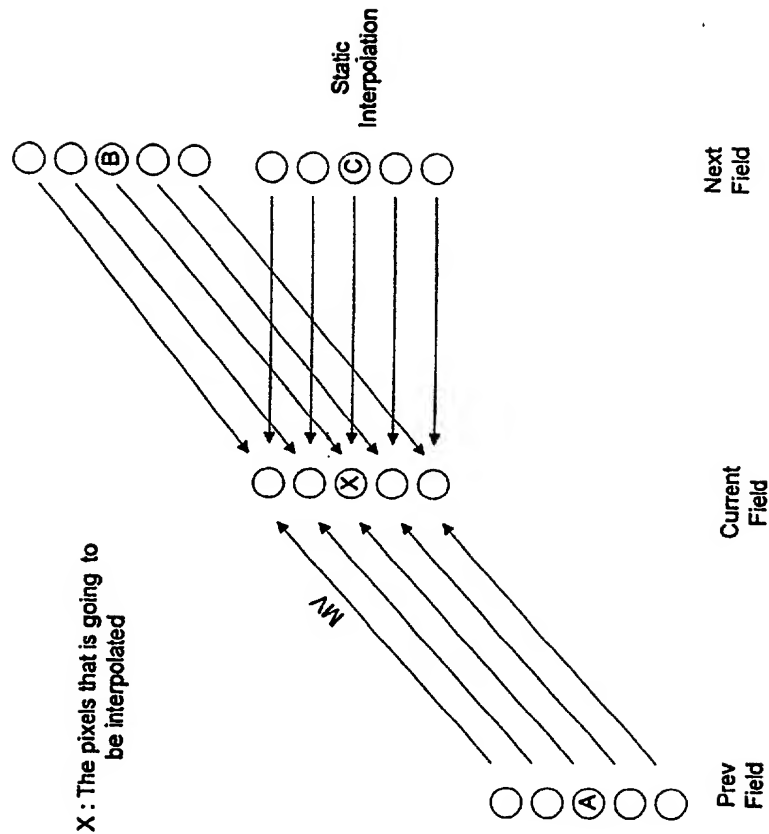


Fig. 27



The prediction process of 3 Stage Adaptive Filter